Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for determining whether to enforce a plurality of filter rules for a packet including a key in a computer network, each of the plurality of filter rules having a priority, the method comprising the steps of:

dividing the plurality of filter rules into at least one group based on the priority of each of the plurality of filter rules, each of the plurality of filter rules in each of the plurality of groups having a priority that is equal;

(a) accumulating statistics for each of the plurality of filter rules, the statistics indicating a frequency of enforcement for each of the plurality of filter rules; and

(b) placing the plurality of filter rules in an order in each group for testing against the key, the order being based on the frequency of each filter rule of the plurality of filter rules.

2. Canceled.

3. (Currently Amended) The method of claim 1 wherein the ordering step (b) further includes the step of:

(b1) providing a decision tree for testing the plurality of filter rules, the decision tree being configured based on the frequency of each of the plurality of filter rules and so that the plurality of filter rules can be tested in the order, a first portion of the plurality of filter rules having at least one higher priority being placed higher in the tree.

4. (Currently Amended) The method of claim 3 wherein the decision tree providing step (b1) further includes the steps of:

(b1i) rebuilding the decision tree after the expiration of an interval of time.

5. (Original) The method of claim 4 wherein the interval of time is determined based on a determination of how frequently a second portion of the plurality of filter rules is enforced.

6. (Original) The method of claim 5 wherein the interval of time decreases when the first portion of the plurality of filter rules are accessed less frequently than a third portion of the plurality of filter rules.

7. (Original) The method of claim 4 when the interval of time is determined based on a previous interval of time.

8. (Currently Amended) The method of claim 4 wherein the computer network further includes a network processor and wherein the rebuilding step (b1i) further includes the step of:

(b1i a) placing the plurality of filter rules in the decision tree based on the priority of each of the plurality of filter rules and at least one performance factor of the network processor.

9. (Currently Amended) A system for determining whether to enforce a plurality of filter rules for a packet including a key in a computer network, each of the plurality of filter rules having a priority, the system comprising:

at least one network processor for <u>dividing the plurality of filter rules into a plurality of groups based on the priority of each of the plurality of filter rules, each of the plurality of filter rules in each of the plurality of groups having a priority that is equal,</u> accumulating statistics for each of the plurality of filter rules, the statistics indicating a frequency of enforcement for each of the plurality of filter rules and testing a portion of the plurality of filter rules <u>in each group</u> against the key in an order <u>for the group</u>, the order being based on the frequency of each filter rule of the portion of the plurality of filter rules; and

at least one memory for storing the plurality of filter rules.

10.   Canceled.

11. (Original) The system of claim 9 further comprising:

a decision tree for testing the plurality of filter rules, the decision tree being configured based on the frequency of each of the plurality of filter rules and so that the network processor tests portion of the plurality of filter rules in the order, a first portion of the plurality of filter rules having at least one higher priority being placed higher in the tree.

12. (Original) The system of claim 11 wherein the decision tree is rebuilt after the expiration of an interval of time.

13. (Original) The system of claim 12 wherein the interval of time is determined based on a determination of how frequently a second portion of the plurality of filter rules is enforced.

·14. (Original) The system of claim 13 wherein the interval of time decreases when the first portion of the plurality of filter rules are accessed less frequently than a third portion of the plurality of filter rules.

15. (Original) The system of claim 12 when the interval of time is determined based on a previous interval of time.

16. (Original) The system of claim 12 wherein the plurality of filter rules is placed in the decision tree based on the priority of each of the plurality of filter rules and at least one performance factor of the network processor.

17. (Original) The system of claim 9 wherein the at least one memory includes a fast memory and wherein a first portion of the plurality of filter rules are placed in the fast memory, each of the first portion of the plurality of filter rules having a higher priority.

18. (Currently Amended) A switch for use in a computer network, the switch determining whether to enforce a plurality of filter rules for a packet including a key, each of the plurality of filter rules having a priority, the switch comprising:

at least one network processor for dividing the plurality of filter rules into a plurality of groups based on the priority of each of the plurality of filter rules, each of the plurality of filter rules in each of the plurality of groups having a priority that is equal, accumulating statistics for each of the plurality of filter rules, the statistics indicating a frequency of enforcement for each of the plurality of filter rules and testing a portion of the plurality of filter rules in each group

against the key in an order for the group, the order being based on the frequency of each filter

rule of the portion of the plurality of filter rules;

at least one memory for storing the plurality of filter rules; and

a switch fabric coupling the ~~plurality of processors~~at least one network processor.

19. (Currently Amended) A computer-readable medium including a program for

determining whether to enforce a plurality of filter rules for a packet including a key in a

computer network, each of the plurality of filter rules having a priority, the program including

instructions for:

dividing the plurality of filter rules into at least one group based on the priority of each of

the plurality of filter rules, each of the plurality of filter rules in each of the plurality of groups

having a priority that is equal;

~~(a)~~ accumulating statistics for each of the plurality of filter rules, the statistics

indicating a frequency of enforcement for each of the plurality of filter rules; and

~~(b)~~ placing the plurality of filter rules in an order in each group for testing against the

key, the order being based on the frequency of each filter rule of the plurality of filter rules.

20. Canceled.

21. (Currently Amended) The computer-readable medium of claim 19 wherein placing

instructions ~~(b)~~ further includes instructions for:

~~(b1)~~ providing a decision tree for testing the plurality of filter rules, the decision tree

being configured based on the frequency of each of the plurality of filter rules and so that the

plurality of filter rules can be tested in the order, a first portion of the plurality of filter rules having at least one higher priority being placed higher in the tree.

22. (Currently Amended) The computer-readable medium of claim 21 wherein the decision tree providing instructions (b1) further includes instructions for:

(b1i) rebuilding the decision tree after the expiration of an interval of time.

23. (Original) The computer-readable medium of claim 22 wherein the interval of time is determined based on a determination of how frequently a second portion of the plurality of filter rules is enforced.

24. (Original) The computer-readable medium of claim 23 wherein the interval of time decreases when the first portion of the plurality of filter rules are accessed less frequently than a third portion of the plurality of filter rules.

25. (Original) The computer-readable medium of claim 22 when the interval of time is determined based on a previous interval of time.

26. (Currently Amended) The computer-readable medium of claim 22 wherein the computer network further includes a network processor and wherein the rebuilding instructions (b1i) further includes instructions for:

(b1i-1) placing the plurality of filter rules in the decision tree based on the priority of each of the plurality of filter rules and at least one performance factor of the network processor.

27. (Currently Amended)   A method for determining whether to enforce a plurality of filter rules for a packet including a key in a computer network, each of the plurality of filter rules having a priority, the method comprising ~~the steps of~~:

dividing the plurality of filter rules into at least one group based on the priority of each of the plurality of filter rules, each of the plurality of filter rules in each of the plurality of groups having a priority that is equal;

~~(a)~~ accumulating statistics for each of the plurality of filter rules, the statistics indicating a frequency of enforcement for each of the plurality of filter rules; and

~~(b)~~ testing a portion of the plurality of filter rules in each group against the key in an order for that group, the order being based on the frequency of each filter rule of the portion of the plurality of filter rules.